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ANNUAL REPORT

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OF THE

INSPECTOR OF BUILDINGS

FOR THE

YEAR 1877.



BOSTON:

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CITY OF BOSTON.



ANNUAL REPORT

OF THE

INSPECTOR OF BUILDINGS

FOR THE YEAR 1877.

DEPARTMENT FOR THE SURVEY AND INSPECTION OF
BUILDINGS.

OFFICE OF THE INSPECTOR OF BUILDINGS,
CITY HALL, January 1, 1878.

To the Honorable the City Council of the City of Boston: —

GENTLEMEN, — In compliance with the provisions of section 7, of chapter 280, of the Laws of 1871, I have the honor to submit for your consideration a detailed report of the operations of this department for the year ending December 31, 1877.

Very respectfully, I am your obedient servant,

JOHN S. DAMRELL,
Inspector of Buildings.

Under the provisions of the statutes relating to buildings in the City of Boston, and under the provisions of the city ordinances relating to buildings, the department has supervision over the following matters: —

The erection of brick, stone, and iron buildings, under statute provisions, throughout the entire city limits.
The erection of wooden or frame buildings, of limited dimensions and range, outside of the building limits, under the provisions of the city ordinance.

Additions, alterations, and repairs upon all classes of buildings, with especial reference to their compliance with present requirements of the building law.

The inspection of unsafe buildings and structures, with full power to require the securing or removal of the same, and in cases of immediate danger, where the security of the public is imperilled in life and limb, authority to enter upon, secure, or take down the same, as the exigencies of the public safety, in the opinion of the Inspector, may require.

The examination of buildings damaged by fire or accident, with authority to enter upon the premises and investigate the origin of fires.

The inspection of buildings liable to take fire from unsafe flues and heating apparatus.

The supervision and the protection of the building limits; the district in which the erection of independent wooden buildings is prohibited by statute law, with a limitation as to wharves.

Special authority invested in the Inspector of Buildings to issue permits for wooden or frame sheds, for special purposes, at his discretion, upon wharves situated within the building limits of the city.

The examination for approval of plans of proposed buildings to be occupied as churches, theatres, halls, railroad-stations, school-houses, or for any public purpose whatever.

The examination of plans and specifications of proposed tenement-houses, public and family hotels, with reference to their compliance with special statute provisions regulating area for light and ventilation, material of construction, water-closets, drainage, cesspools, height of habitable rooms, window openings, hall-ways, construction of stair-ways, fire-escapes, and the height of the building as regulated by the width of the street upon which they are proposed to be erected.

The enforcement of statutory provisions requiring fire-escapes upon certain buildings in which operatives are employed, in factories, mills, or manufactories, tenement-houses and hotels, etc.

Authority invested in the Inspector of Buildings, under the act relating to means of egress from buildings occupied for public purposes, to regulate the entrances, door-ways, passage-ways, their width, construction, and number, and obstructions that may be placed therein, the arrangement of the seatings, and the use of combustible materials, draperies, scenery, properties, etc.

The inspection of all hoist-way and elevator openings in buildings, with reference to their construction in conformity with the requirements of statute law and their use.

Compliance with the requisitions of the Board of Health.

The setting of steam-engines and steam-boilers.

The building of furnaces for melting iron, glass, or other metals.

The building of ovens, kilns, etc.

The setting of heating-apparatus, in all classes of buildings.

The examination of the grade of cellar bottoms of buildings built upon filled land; reporting violations of the same to the Board of Aldermen.

The storage of combustible material in buildings occupied in whole or in part as dwellings, situate within the building limits of the city.

Buildings authorized by the Board of Aldermen to be used for stables, are licensed to be occupied for this purpose under the direction of the Inspector of Buildings.

The examination of buildings, with reference to their being provided with ample and sufficient means of egress, and their compliance with statute requirements, upon petition to the Board of Aldermen for license to occupy the same as a place of public amusement.

Examination of private signs located in the public highways, upon a license being granted by the Board of Aldermen to maintain the same, if secured to the satisfaction of the Inspector of Buildings.

Authority to apply to the Supreme Judicial Court for an injunction restraining the construction of windows, steps, and porches, projecting into or over any public highway.

The number of permits that have been issued for the erection of new buildings, for alterations and additions, for steam-engines, boilers, furnaces, etc., and especially in the work of unsafe buildings and fire-escapes, has been in excess of that of the previous year.

As has been the custom of the department from the time of its establishment, especial attention has been given in the matter of the inspection of the erection of all new buildings, carefully noting improper methods of construction and deviations from prescribed building regulations.

The sharp competition however among builders has reduced profits to an exceptionally small margin, resulting in a tendency, in many cases, to secure them from out of the material and workmanship, rather than from the amount of the contract.

The continual change in the occupation of old buildings that is constantly in progress throughout the city, necessitates alterations in the manner of their construction of a more or less radical character. Particularly is this the case with those that are situate within the boundaries of the district known as the building limits. Buildings that here were erected to be occupied perhaps as dwellings, of small size, low height, thin walls, light floors, with a foundation to correspond in strength with the rest of the structure, become desirable, from their location, for mercantile, mechanical, or manufacturing purposes.

The change may be gradual, commencing first by altering the lower story into a store, the erection of an addition at the rear, increasing the height of the building, and afterwards followed by a complete change of occupation throughout the premises, — a change in the use of so radical a nature, that if the building was now to be erected as a new building, for the later occupation, the deviation from the prescribed building regulations would be so great that the department could not, under the law, authorize their erection.

To these alterations the attention of the department has been given to the extent of the force that has been confided to it.

In the matter of securing ample means of egress and fire-escapes on certain classes of buildings, required by law to be provided with them, and which, upon inspection, appeared to be deficient in these respects, has the attention of the department during the year been more particularly directed, its first object being to secure a proper compliance with the requisitions that had been issued during the latter part of the previous year upon our public buildings; and second, to ascertain by an inspection of the buildings in the city, the location of our tenement, boarding, and lodging-houses, hotels, charitable institutions, etc., the number of their inmates, the condition of the buildings, their danger from fire, and the facilities for egress maintained therein, in case of fire or accident.

To secure information on this subject, that in all respects would be accurate and complete, it was apparent that the system of inspection should provide against omissions, and the plan of numbering and inspecting by blocks, instead of streets, was adopted.

The work of this examination is progressing in a manner that is answering the end for which it was instituted. The condition of each of the above classes of buildings being fully noted, a plan of the premises drawn, and, upon completion, the reports will be bound together into volumes,

affording information, that heretofore has not been accessible.

The work of securing unsafe buildings, unsafe walls, etc., has been unusually exacting, having been much larger than during any previous year, obliging the department in several cases, through the delinquencies of the owners, to enter upon, take down or secure them, to the extent the safety of the public required.

There is generally great sensitiveness on the part of owners to have the unsafe condition of their buildings made a matter of public comment, and this feeling has been respected when a disposition on their part has been manifested to take immediate measures to secure them.

At the last session of the Legislature, in compliance with the petition of His Honor the Mayor, as authorized by the City Council, was passed the following Act, regulating the construction of windows, doors, porches, and steps, where the same project over or into any public highway or street:—

[CHAP. 84.]

AN ACT IN ADDITION TO AN ACT TO PROVIDE FOR THE REGULATION AND INSPECTION OF BUILDINGS, THE MORE EFFECTUAL PREVENTION OF FIRE, AND BETTER PRESERVATION OF LIFE AND PROPERTY IN BOSTON.

Be it enacted, etc., as follows:—

SECTION 1. No person shall hereafter erect, place, construct, or cause to be erected, placed or constructed, or shall commence to erect, place or construct any portico, porch, door, window or step projecting into or over any public highway, street, causeway, bridge or square within the City of Boston.

SECT. 2. If any person shall violate the provisions of the foregoing section, he shall, upon the application of the Inspector of Buildings of the City of Boston, be liable to the processes of law and equity set forth in the twenty-third section of chapter three hundred and seventy-one of the acts of the year eighteen hundred and seventy-two.

SECT. 3. This act shall take effect upon its passage. [Approved March 29, 1877.]

The immediate occasion of the passage of this Act was the increasing tendency among builders, in the construction of these projections at the expense of the public highway,—the danger of the evil becoming so great as to become unmanageable,—and to afford protection to adjoining owners from serious injury, who, in many cases, were without legal recourse.

Under the operation of the provisions of this Act, plans of proposed buildings, and plans of proposed alterations upon buildings having these projections, are required to be modified in this respect before a permit for their erection or

alteration is issued ; and, when their erection has been without notice to the department, immediate action has secured their removal.

The law has now become so well known among architects and builders that, at the present time, it is exceptional for the department to have plans of proposed buildings with these projections on them submitted to it for inspection and approval.

The department has not had occasion to refer any case of violation, arising under the provisions of this Act, to the City Solicitor for prosecution.

Upon the second day of October, by the passage of the following ordinance, the City Council transferred the authority to issue permits for the occupation of streets for building purposes, from the Chief of Police to the Inspector of Buildings.

AN ORDINANCE FOR THE OCCUPANCY OF STREETS FOR BUILDING PURPOSES.

Be it ordained by the Aldermen and Common Council of the City of Boston, in City Council assembled, as follows:—

SECTION 1. Every person wishing to occupy or use any portion of any of the streets for the erection or repair of any building upon land abutting thereon, shall make application therefor to the Inspector of Buildings, who, subject to the direction of the Board of Aldermen, shall have power and authority to grant permits for the occupation or use, for building purposes, of such part of any street, and for such length of time, and under such limitations and restrictions, as may be required by any ordinance, or by the public convenience ; and all such permits may be revoked by the Inspector of Buildings at any time when the holders of them fail to comply with any rule or regulation under which they are granted, or when, in the opinion of the Inspector of Buildings, the public good requires such revocation. And the part or portion so allotted, if any, and no other part of said street, shall be used for laying all the materials for any such building or repairing, and for receiving the rubbish arising therefrom. And all the rubbish arising therefrom or thereby shall be carried away by the person or persons so building or repairing, at such convenient time as the Board of Aldermen or Inspector of Buildings may direct ; and in case of neglect or refusal so to do, it shall be removed by the Superintendent of Streets, the Chief of Police, or the Deputy Chief of Police, at the expense of such person or persons.

SECT. 2. In all cases the space so allotted shall be enclosed with a sufficient fence, which shall be continued during the whole time such occupation exists. And a lighted lantern or lanterns, or some other proper and sufficient lights, shall be fixed to some part or parts of such fence, or in some other proper manner. And said lights or lanterns shall be so kept lighted from the beginning of twilight every evening, through the whole of every night, during said occupation.

SECT. 3. Any person licensed or permitted as aforesaid to occupy any part of any street, while erecting or repairing any building, shall provide a safe and convenient passage around or over the same for public travel, and shall be responsible for any injury sustained in consequence of any neglect so to do.

SECT. 4. It shall be the duty of the Inspector of Buildings to see that the laws, ordinances, orders, and regulations, now or at any time in force respecting the use or occupancy of any street or part thereof, for the purpose of erecting, altering, or repairing or removing any building are observed and enforced.

SECT. 5. Any person violating any of the provisions of this ordinance shall be liable to a penalty of not less than two dollars nor more than fifty dollars for each offence, and to a like penalty for each day's continuance thereof.

The desirability of investing this department with authority to issue these permits, had often been suggested by builders and contractors, and during the short time that it has had the supervision of their issue, the results would seem to indicate that the change has been an advantageous one, and has tended to facilitate building operations.

THE OPERATIONS OF THE DEPARTMENT.

The number of permits that have been issued during the year for brick, stone, and iron buildings	265
The number of permits issued for wood and frame buildings	532
The number of permits issued to erect sheds situate upon wharves within the building limits of the city	13
The number of buildings for which permits have been issued to have additions built to them, or to have alterations and repairs made upon them	2,343
The number of steam-engines and steam-boilers for which permits have been issued to set	154
The number of ovens for which permits have been issued to build	21
The number of kilns for which permits have been issued to build	1
The number of furnaces	42
The number of stills, retorts, etc.	13
The number of notices received of intention to put in heating apparatus	481
The number of street-signs, lanterns, and transparencies examined	21
The number of public halls examined with reference to granting a license to occupy the same	4
The number of buildings upon which detailed reports have been made with reference to fire-escapes and means of egress	2,869
The number of buildings examined that were damaged by fire	349

The number of hoist-ways examined	110
The number of permits issued to occupy streets for building purposes	1,239
The number of buildings, walls, etc., reported to be in an unsafe condition	220
The number of chimneys reported unsafe	388
The number of defective flues	139
The number of unsafe heating-apparatus	126
The number of buildings reported as being deficient in means of egress and fire-escapes	144
The number of violations reported	833
The number of cases referred to the City Solicitor .	9
The number of brick buildings completed during the year	191
The number of wooden and frame buildings completed	506
The number of buildings upon which completed alterations have been made, and to which additions have been built, and upon which repairs have been made	2,165
The number of steam-engines set, and furnaces and ovens built	266
The number of heating-apparatus set	505
 The estimated cost of completed brick buildings, \$4,283,775	
The estimated cost of completed wood and frame buildings	\$1,048,590
The estimated cost of completed additions, alterations, and repairs	\$1,114,290
The estimated cost of steam-engines, steam-boilers, and the building ovens, furnaces, etc.	\$137,115
The estimated cost of heating-apparatus, set	\$68,736
The estimated cost of securing unsafe buildings, unsafe walls, unsafe foundations, etc.	\$18,816
The estimated cost of protecting, hoist-way openings	\$3,750
The estimated cost of securing dangerous chimneys	\$5,019
The number of examinations that have been made	22,316
The number of notices issued	989

PERMITS ISSUED FOR BRICK, STONE, AND IRON BUILDINGS.

Boiler and steam engine-houses	.	.	.	.	7
Breweries	.	.	.	.	3
Carriage-houses and wagon-sheds	.	.	.	.	2
Chapels	.	.	.	.	2
Dwellings	.	.	.	.	137
Dwellings and stores	.	.	.	.	14
Dwellings and offices	.	.	.	.	1
Family hotels and tenement-houses	.	.	.	.	13
Family hotels, tenement-houses and stores	.	.	.	.	7
Green-houses	.	.	.	.	2
Hotels	.	.	.	.	2
Ice-houses	.	.	.	.	2
Laundries	.	.	.	.	1
Manufactories	.	.	.	.	8
Markets	.	.	.	.	7
Mechanical	.	.	.	.	5
Mercantile	.	.	.	.	12
Offices	.	.	.	.	2
Railroad stations	.	.	.	.	3
Stables	.	.	.	.	15
Stable and laundry	.	.	.	.	2
Scale-house	.	.	.	.	1
School-houses, public	.	.	.	.	2
Storage	.	.	.	.	6
Stores	.	.	.	.	2
Stores and offices	.	.	.	.	3
Workshops	.	.	.	.	4
 Total	.	.	.	.	265

Exhibit A will give the statement in tabular form.

EXHIBIT A.

Showing the whole number of Brick Buildings in each Ward for which Permits have been issued.

EXHIBIT B.

Showing the Styles of Roofs and the Number of Stories of the foregoing Buildings.

WARD.	NO. OF STORIES.						STYLE OF ROOF.					Total.
	1	2	3	4	5	6	Man.	Flat.	Pitch.	Hip.	Other styles.	
1	4	1	.	.	.	.	.	5	...	...	...	5
2	1	...	2	.	.	.	.	3	...	...	...	3
4 . . . . .	.	1	.	.	.	.	1	...	...	...	...	1
5 . . . . .	.	.	1	.	.	.	.	1	...	...	...	1
6	1	2	3	.	.	.	.	5	1	...	...	6
7	1	...	.	2	2	.	.	5	...	...	...	5
9	1	...	1	.	.	.	.	2	...	...	...	2
10 . . . . .	.	.	.	3	3	2	1	7	...	...	...	8
11	13	16	36	6	6	1	55	21	2	...	...	78
12	10	2	.	10	2	1	1	22	...	1	1	25
13	3	...	1	.	.	.	.	4	...	...	...	4
14	5	2	6	.	.	.	5	8	...	...	...	13
15 . . . . .	.	.	12	.	.	.	.	11	1	...	...	12
16	1	...	.	2	.	.	1	2	...	...	...	3
17 . . . . .	.	1	5	3	.	.	.	9	...	...	...	9
18	3	5	14	1	1	.	9	15	...	...	...	24
19	1	2	.	1	.	.	1	3	...	...	...	4
20	3	3	4	4	.	.	2	9	3	...	...	14
21	1	18	3	1	1	.	16	5	3	...	...	24
22	1	...	8	2	1	.	.	11	1	...	...	12
23	4	1	2	1	.	.	1	4	3	...	...	8
25	2	2	.	.	.	.	1	3	...	...	...	4
Totals	55	56	98	36	16	4	94	155	14	1	1	265

PERMITS ISSUED FOR WOODEN AND FRAME BUILDINGS.

Boat-houses	2
Boat and club houses	2
Boiler and engine-houses	3
Bonded warehouses	1
Carriage-houses and wagon-sheds	10
Charitable institutions	1
Churches and chapels	4
Coal and lumber sheds	5
Dwellings	259
Dwellings and stores	18
Grand stand	1
Green-houses	2
Hospital	1
Ice-houses	3
Laundries	3
Manufactories	17
Mechanical	5
Markets	2
Offices	7
Poultry-houses	3
Railroad stations	3
Restaurants	1
Railroad gate-house	1
Scale-houses	1
Stables	101
School-houses, public	1
Storage	35
Stores	22
Work-shops	18
 Total	 532

EXHIBIT C.

Showing the whole number of Wood and Frame Buildings in each Ward for which Permits have been issued.

REPORT OF INSPECTOR OF BUILDINGS.

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EXHIBIT D.

Showing the Styles of Roofs and the Number of Stories of the foregoing Buildings.

WARDS.	NO. OF STORIES.				STYLE OF ROOF.				TOTALS.
	1	2	3	4	Man.	Flat.	Pitch.	Hip.	
1	22	15	1	...	9	13	16	...	33
2	13	19	...	...	14	5	13	...	32
3	5	2	4	...	...	8	3	...	11
4	6	3	13	...	...	17	5	...	22
5	2	1	9	...	...	11	1	...	12
13	8	1	6	...	...	7	8	...	15
14	7	10	...	...	6	8	3	...	17
15	8	10	3	...	6	13	2	...	21
17 . . . . .	...	1	...	...	...	1	...	...	1
18	5	...	...	...	...	5	...	...	5
19 . . . . .	...	7	2	...	3	4	2	...	9
20	16	22	1	...	5	17	10	7	39
21	25	43	...	...	25	5	35	3	68
22	12	10	3	...	5	9	11	...	25
23	35	57	1	...	1	6	79	7	93
24	51	31	4	...	8	17	55	6	86
25	22	15	...	1	5	6	26	1	38
Totals	237	247	47	1	87	152	269	24	532

RECAPITULATION,

Showing Total Number of Buildings in each Ward for which Permits have been issued, number of Stories and Style of Roof.

WARDS.	NO. OF STORIES.						STYLE OF ROOF.				No. of Buildings.	
	1	2	3	4	5	6	Man.	Flat.	Pitch.	Hip.		
1	26	16	1	..	..	..	9	18	16	..	43
2	14	19	2	..	..	..	14	8	13	..	35
3	5	2	4	..	..	..	..	8	3	..	11
4	6	4	13	..	..	..	1	17	5	..	23
5	2	1	10	..	..	..	..	12	1	..	13
6	4	2	3	..	..	..	..	8	1	..	9
7	1	2	..	2	2	..	..	7	..	..	7
9	2	..	1	..	..	..	..	3	..	..	3
10 . . . . .	..	..	..	3	3	2	1	7	..	..	8
11	13	16	36	6	6	1	55	21	2	..	78	
12	16	3	..	10	2	1	1	28	1	1	32	
13	11	1	7	..	..	..	..	11	8	..	19
14	12	12	6	..	..	..	11	16	3	..	30
15	8	10	15	..	..	..	6	24	3	..	32
16	1	..	..	2	..	..	1	2	..	..	3
17 . . . . .	..	2	5	3	..	..	..	10	..	..	10
18	8	5	14	1	1	..	9	20	..	..	29
19	1	9	2	1	..	..	4	7	2	..	13
20	19	25	5	4	..	..	7	26	13	7	53
21	26	61	3	1	1	..	41	10	38	3	92	
22	13	10	11	2	1	..	5	20	12	..	37	
23	39	58	3	1	..	..	2	10	82	7	101
24	51	31	4	..	..	..	8	17	55	6	86
25	24	17	..	1	..	..	6	9	26	1	42
	302	306	145	37	16	4	181	319	284	25	1	810

SPECIAL PERMITS.

The provisions of Section 1, of Chapter 260, of the Acts of 1872, prohibit the erection of independent wooden buildings within the boundaries of the district known as the building limits of the City of Boston, with certain exceptions as to wharves.

Wooden additions to existing buildings in this district, can, however be erected, with a limitation as to height and area to be covered.

These limits are established by the City Council under statute, authority, and by an ordinance approved July 8, 1871, were defined as follows: —

Beginning at the intersection of the centre line of Dover and Albany streets, thence running eastwardly through the centre of Dover street to the Harbor Commissioners' line; thence around the northerly portion of the "City Proper," by the said Harbor Commissioners' line to a point on Charles river, opposite the centre line of Parker street or cross dam; thence through the centre of Parker street or cross dam, to a point opposite the centre of Ruggles street; thence through the centre of Ruggles street to the centre of Washington street; thence through the centre of Washington street to a point opposite the centre of Palmer street; thence through the centre of Palmer and Eustis streets to the centre of Hampden street; and thence through the Centre of Hampden and Albany streets to the point of beginning.

The said district being shown by a shaded red line on a plan made by the City Surveyor, dated June 26, 1871, and deposited in the office of the City Surveyor.

SPECIAL PERMITS ISSUED.

Permits have been issued for the erection of wooden structures upon wharves within the building limits of the city as follows: —

Boiler and engine houses	.	.	.	.	.	1
Offices	.	.	.	.	.	1
Passenger-shed	.	.	.	.	.	1
Lobster-house	.	.	.	.	.	1
Storage of coal	.	.	.	.	.	3
Storage of freight	.	.	.	.	.	3
Storage of grain	.	.	.	.	.	1
Storage of lumber	.	.	.	.	.	2
 Total	.	.	.	.	.	13

They were erected in the following wards: —

Ward 6	.	.	.	.	.	.	.	.	3
Ward 7	.	.	.	.	.	.	.	.	2
Ward 9	.	.	.	.	.	.	.	.	1
Ward 12	.	.	.	.	.	.	.	.	7
									—
Total	.	.	.	.	.	.	.	.	13

STEAM-ENGINES, BOILERS, FURNACES, ETC.

The number of permits issued during the year under the provisions of Section 18, of Chapter 371, of the Acts of 1872, to set steam-engines and boilers and to build ovens, furnaces, etc., is as follows: —

STEAM-ENGINES AND BOILERS.

Steam-engines	.	.	.	.	.	.	.	9
Steam-boilers	.	.	.	.	.	.	.	104
Steam-engines and boilers	.	.	.	.	.	.	.	41
								—
Total	.	.	.	.	.	.	.	154

OVENS.

Bakers' ovens	.	.	.	.	.	.	.	10
Brick ranges	.	.	.	.	.	.	.	6
Calcining ovens	.	.	.	.	.	.	.	4
Japanning ovens	.	.	.	.	.	.	.	1
								—
Total	.	.	.	.	.	.	.	21

KILNS.

Glass-staining and decorating kilns	.	.	.	.	.	.	.	1
								—
Total	.	.	.	.	.	.	.	1

STILLS, RETORTS, ETC.

Dyewood stills	.	.	.	.	.	.	.	2
Oil stills	.	.	.	.	.	.	.	1
Retorts for distilling tar	.	.	.	.	.	.	.	2
Kettles for the manufacture of concrete	.	.	.	.	.	.	.	1
Kettles for the manufacture of asphalt	.	.	.	.	.	.	.	1
Tanks for the manufacture of asphalt	.	.	.	.	.	.	.	5
Kettles for the manufacture of canned meat	.	.	.	.	.	.	.	1
								—
Total	.	.	.	.	.	.	.	13

FURNACES.

Blacksmiths' furnaces	.	.	.	.	.	.	1
Brick furnaces	.	.	.	.	.	.	11
Melting furnaces	.	.	.	.	.	.	4
Tailors' furnaces	.	.	.	.	.	.	1
Blacksmiths' forges	.	.	.	.	.	.	24
Iron sand-heaters	.	.	.	.	.	.	1
							—
Total	.	.	.	.	.	.	42

HEATING APPARATUS.

Furnaces and other heating apparatus	.	.	.	.	.	481
Total	.	.	.	.	.	481

EXHIBIT E.

Showing the whole number of Steam Engines, Boilers, Furnaces, etc., in each Ward, for which Permits have been issued.

WARDS.

REPORT OF INSPECTOR OF BUILDINGS.

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EXHIBIT E.—Continued.

WARDS.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	TOTAL.	
Blacksmiths' furnaces	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1	
Brick furnaces	•	•	•	•	•	3	•	•	•	6	•	2	•	•	•	•	•	•	•	•	•	•	•	•	•	11	
Melting furnaces	•	•	•	•	•	2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	4	
Tailors' furnaces	•	•	•	•	•	•	•	•	•	•	•	1	•	•	•	•	•	•	•	•	•	•	•	•	•	1	
Blacksmith forges	•	•	•	•	•	2	•	•	•	•	•	•	3	1	2	•	•	5	•	6	•	2	1	•	2	24	
Iron sand-heaters	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1	•	•	•	•	•	•	1	
Heating apparatus	•	4	•	6	7	9	12	8	8	20	33	63	16	3	10	5	11	23	40	8	20	53	3	66	48	5	481
	10	10	6	14	12	23	28	9	21	67	72	44	8	17	7	15	34	51	19	36	61	11	75	54	8	712	

ADDITIONS, ALTERATIONS, AND REPAIRS.

The number of buildings for which permits have been issued to have repairs and alterations made on them and to have additions built to them, is 2,343.

The estimated cost of alterations, repairs, and additions that were completed during the year is \$1,114,290.

The nature of the repairs, alterations, and additions is as follows:—

Bay-windows built	43
Brick additions erected	66
Buildings increased in height	88
Buildings reduced in height	11
Buildings raised	110
Buildings remodelled for business purposes	60
Buildings remodelled for dwelling purposes	47
Buildings secured, repaired, and altered	811
Buildings altered to stables	22
Cellar bottoms concreted	6
Cellars excavated and deepened	26
Change of location	134
Chimnies built and repaired	87
Door-ways altered	90
Door-ways cut in external and party walls	208
Floors altered, raised, and repaired	120
Foundations built and repaired	261
Iron columns and beams	44
Lower story altered to mercantile purposes	73
Openings made in walls	45
Partitions built and their location changed	26
Roofs altered in style	102
Roofs repaired and secured	170
Skylights put in, etc.	23
Stair-ways built, altered, and repaired	87
Window openings cut, enlarged, and altered,	312
Wooden additions erected	482
Sundries	7
 Total	 3,561

EXHIBIT F.

Showing the whole Number in each Ward for which Permits have been issued to have Alterations and Repairs made and Additions built.

	WARDS.														TOTALS.												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		
Bay-windows built	1	..	2	..	..	..	..	2	2	1	..	3	1	..	1	..	1	..	..	5	7	1	10	4	1	43
Brick additions	1	..	1	..	3	2	6	4	6	7	4	7	3	1	2	2	6	4	4	2	..	..	1	..	..	66
Buildings increased in height . . . . .	..	5	2	2	2	3	1	1	7	1	2	7	2	10	4	1	..	2	4	3	4	8	10	5	88	
Buildings reduced in height	1	1	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	5	..	11
Buildings raised	5	1	..	6	6	..	1	1	..	..	..	1	9	7	11	1	2	1	13	7	4	1	8	12	13	110
Buildings remodelled for business purposes	1	1	..	1	..	5	4	..	1	14	..	6	..	7	1	2	2	..	4	..	..	1	5	4	1	60
Buildings remodelled for dwelling purposes	2	2	3	2	6	3	3	2	1	1	1	..	1	3	1	9	6	1	47
Buildings secured, repaired and altered .	16	50	35	28	28	58	44	14	35	73	25	48	26	29	14	25	13	23	17	14	12	99	49	10	811		
Buildings altered to stables	1	..	..	1	..	3	3	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	..	..	22
Cellar bottoms concreted . . . . .	..	1	..	..	..	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
Cellars excavated and deepened	1	1	..	1	..	..	2	..	4	..	4	1	2	1	..	1	..	2	..	1	..	..	1	4	..	26
Change of location	6	4	4	6	3	2	1	1	2	9	5	12	..	2	1	5	15	..	9	14	20	13	134
Chimneys built and repaired	9	4	..	5	1	4	2	2	2	7	2	3	3	..	4	2	..	2	5	8	1	1	4	13	3	87	
Door-ways altered	3	4	2	6	6	4	8	..	1	8	1	4	..	5	16	3	1	7	9	..	1	1	1	..	90

Doorways cut in external and party-walls	3	1	1	5	6	7	13	1	4	26	6	13	85	3	..	12	2	3	3	3	1	4	2	1	7	9	..	208
Floors altered, raised, and repaired	8	10	3	3	2	3	10	2	2	17	1	5	4	3	2	19	2	..	4	2	1	1	7	9	..	120		
Foundations built and repaired	13	19	7	13	6	6	7	5	2	7	6	6	17	15	21	2	7	2	14	10	5	8	25	24	14	261		
Iron columns and beams . . . . .	..	..	..	..	..	..	4	7	..	1	14	..	6	5	..	3	1	..	..	2	1	..	..	..	..	..	44
Lower story altered to mercantile purposes	3	2	2	4	8	..	4	2	1	14	..	1	4	2	1	3	6	4	4	1	2	2	..	3	..	73		
Openings made in walls . . . . .	..	1	..	..	2	..	3	8	1	..	12	..	1	..	..	6	..	..	..	5	..	1	1	3	..	1	45
Partitions built and their location changed . . .	..	1	1	1	1	2	1	1	1	5	1	3	2	..	..	..	1	..	..	1	..	..	4	..	..	..	26
Roofs altered in style	1	3	4	8	9	2	8	1	6	7	1	4	9	1	6	3	1	4	3	6	2	1	3	..	8	1	102	
Roofs repaired and secured . . . . .	..	11	25	12	1	15	17	8	4	2	5	..	4	15	2	7	3	5	3	8	7	3	..	..	..	..	170
Skylight put in, etc.	1	1	1	3	..	2	8	..	1	23
Stairways built, altered, and repaired . . .	1	1	1	4	5	7	19	1	2	16	3	7	4	1	1	1	7	2	4	..	2	..	5	..	..	..	87
Window openings cut, enlarged, and altered	2	2	5	11	26	14	32	16	17	60	5	17	8	8	5	22	7	3	16	5	2	5	16	8	..	..	312
Wooden additions erected	33	17	20	20	19	8	5	5	5	2	5	2	15	24	18	3	5	6	26	29	30	18	76	73	18	482		
Sundries . . . . .	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7
Totals	122	157	101	131	151	158	201	63	99	316	66	149	229	114	143	118	87	54	149	143	76	68	317	267	82	3,561		

PROJECTING LANTERNS AND SIGNS.

Licenses to maintain lanterns and signs to project into or over any public highway are granted by the Board of Aldermen upon condition that they shall be made safe and secure to the satisfaction of the Inspector of Buildings.

The number that have been examined and reported upon, is as follows:—

Projecting lanterns	.	.	.	.	.	13
Druggists' mortars	.	.	.	.	.	5
Transparencies	.	.	.	.	.	2
Projecting signs	.	.	.	.	.	1
						—
Total	.	.	.	.	.	21

STREET PERMITS.

The number of permits that have been issued during the year by the Police Department, and by the Inspector of Buildings, is as follows:—

Permits in force January 1, 1877	.	.	109
Permits issued during the year	.	.	1,130
			—
Total	.	.	1,239
Permits cancelled during the year	.	.	680
Permits revoked during the year	.	.	3
Permits in force December 31, 1877	.	.	556
			—
Total	.	.	1,239
Prosecutions for violation of conditions of permit	.	.	1

FIRE AND ACCIDENT RECORD.

The number of buildings that have been reported as damaged by fire or accident . . . 349

This number does not include those buildings where the damage has been less than five dollars, nor where the loss was confined to the contents of the building alone.

These buildings are carefully surveyed, and any defect in their construction or any defect in the heating-apparatus, is required to be remedied.

The probable causes of the fires were as follows:—

Copper tank, explosion of	1
Exhaust-pipe, overheated	1
Flues, defective	10
Fireplace, wood-work near	1
Fireworks, explosion of	1
Furnaces, defective	3
Gale of wind	30
Gas, explosion of, from leakage of pipes . .	2
Gas-jet, curtain against	1
" movable	1
" near wood-work	1
" in contact with mosquito netting . .	1
" in window, near combustible material	1
Gas-lighter, careless use of	1
Hot-air pipes, near woodwork	2
Hearth, defective	1
" improperly built	1
Hot ashes placed in barrels	3
" thrown on a pile of excelsior . .	1
" placed against a wooden column	1
Incendiary	51
Kerosene lamps, explosion of	9
" upsetting of	3
" breaking of	2
" leakage of	1
" placed near combustible material . .	1
Kerosene lamps, placed near burning-fluid .	1
Lamp, careless use of by a child	1
Lightning	4
Lime, slackening of	1
Lighted cigar thrown into wooden spittoon, .	2
" thrown among sawdust	1
Lighted tobacco-pipe placed in clothing . .	2
Lighted tobacco-cinders thrown on rags . .	2
Lighted lamp placed in closet	1
Melted metal, overflow of	1
Matches, mice among	5
" children playing with	8
" boys playing with	1
" placed in clothing	1
" thrown into a crevice in the floor .	2
" thrown into waste-basket	1
" thrown into sawdust	2
" careless use of	2

Naphtha, explosion of leakage,	8
" accidental ignition of, in renovating furniture	1
Naphtha lamp, explosion of	1
Oil, boiling over of a kettle of	1
Pitch, boiling over of a kettle of	1
Ranges improperly set	1
Stoves, unprotected	1
" overheated	9
Stove-pipe in contact with wood-work	3
Steam-pipes in contact with wood-work	2
Steam-boilers improperly set	3
Spontaneous combustion of oily-rags	11
" " oil and sawdust	1
" " chemicals	1
" " charcoal	1
Soap, boiling over upon a stove of a kettle of	1
Sparks from chimney	4
" from furnace	1
" from portable furnaces	2
" from stoves	1
" from forge	1
" from ventilator of smoke-house	1
Tar, upsetting upon a stove of a kettle of	1
Unknown	97
Water-pipes, thawing of	1
Caught from adjoining buildings	25
 Total	 349

The occupation of the buildings damaged by fire and accident is as follows:—

Apothecary	1
Bake-house	1
Banks	1
Billiard-saloon	1
Blacksmith-shops	3
Brewery	1
Boarding-houses	2
Boarding and lodging houses	1
Boot and shoe stores	2
Boot and shoe manufactory	1
Boiler-house	1
Caterer	1
Carpenter-shops	5
Cabinet-makers' shops	1

Carriage manufactories	.	.	.	.	2
Carriage repositories	.	.	.	.	1
Clothing stores	.	.	.	.	5
Cloak and mantilla manufactories	.	.	.	.	1
Club-house	.	.	.	.	1
Cooper-shops	.	.	.	.	2
Coffee-roasting	.	.	.	.	1
Corrodung-house	.	.	.	.	1
Chemical manufactory	.	.	.	.	1
Chemical and dye-wood manufactory	.	.	.	.	1
Churches	.	.	.	.	3
Chromo and lithograph establishment	.	.	.	.	1
Dry-goods stores	.	.	.	.	3
Dry-house	.	.	.	.	1
Dwellings	.	.	.	.	150
Engravers	.	.	.	.	1
Express office	.	.	.	.	1
Fancy goods and toy-store	.	.	.	.	1
Flour and grain store	.	.	.	.	1
Florist store	.	.	.	.	1
Fruit store	.	.	.	.	2
Furnace, range, etc., store	.	.	.	.	1
Furniture manufactory	.	.	.	.	5
Furniture store	.	.	.	.	1
Glass-works	.	.	.	.	1
Grocery store	.	.	.	.	4
Green-houses	.	.	.	.	2
Hay and straw dealers	.	.	.	.	1
Harness salesroom	.	.	.	.	1
Hat and cap manufactory	.	.	.	.	2
Hospital wards	.	.	.	.	1
Hotels	.	.	.	.	3
Hoop-skirt manufactory	.	.	.	.	1
Hide and leather dealers	.	.	.	.	1
Ice-house	.	.	.	.	1
Inner soles manufactory	.	.	.	.	1
Iron foundry	.	.	.	.	3
Jewelry and fancy goods store	.	.	.	.	1
" manufactory	.	.	.	.	2
Junk-shop	.	.	.	.	5
Kerosene oil factory	.	.	.	.	4
Lace and ruffle store	.	.	.	.	1
Lager-beer saloon	.	.	.	.	1
Lamp manufactory	.	.	.	.	1
Lead manufactory	.	.	.	.	1
Leather and shoe findings	.	.	.	.	1
Lithographers and publishers	.	.	.	.	1

Liquor stores	2
Linseed-oil manufactory	1
Locomotive works	1
Lounge manufactory	1
Millinery stores	2
Machine-shop	1
Mattrass and bedding manufactory	1
Offices	4
Paints, oils, and putty	1
Paper-stocks	1
Patent-leather factory	1
Photo-electrotype business	1
Photograph goods, etc.	1
Printing, etc.	2
Provision store	1
Pyrotechnist	1
Renovating of furniture, etc.	2
Resin and machinery oils	1
Saloons	7
Schools, public	5
Storage of cotton	1
" " corrod ^{ing} pots	1
" " dredging tools	1
" " furniture	1
" " hay	2
" " lumber	1
" " paints and drugs	1
" " roofing materials	1
" " wagons	1
" " wood and coal	1
Silver plater	1
Shoemakers' wax manufactory	1
Stables	21
Stamping embroidery store	1
Shop for sale of wood	1
Shipwright and calkers' shop	2
Smoke house for curing fish	1
Tailors' trimming store	1
Tallow-rendering works	1
Tenement-houses	10
Tailor shops	5
Tin "	1
Varnish and oils	1
Variety store	2
Wagon sheds	2
 Total	 349

T A B L E
Showing the Number of Brick, Stone, and Wooden Buildings in each Ward during the Buildings, and the Estimated Loss

T A B L E
Showing the Number of Brick, Stone, and Wooden Buildings, etc. — Continued.

HOIST-WAYS AND ELEVATORS.

Buildings having floor openings for hoist-way purposes are required by law to have the openings provided, on each and every floor through which the hoist-way passes, with a good and substantial railing, and such good and sufficient trap-doors with which to close the same, as may be directed and approved by the Inspector of Buildings; and such trap-doors shall be kept closed at all times, except when in actual use by the occupants. .

In all occupied buildings it has been the practice of the department to rule that a hoist-way was in actual use during all business hours, but to insist that at the close of day, when the premises are vacated for the night, the trap-doors should invariably be closed.

There are few provisions of the building law more important than this one. When it is considered that for protective purposes in case of fire, the floors of our buildings are so constructed as to make only an apparent separation of the stories, and that with a large flue extending from the basement of a building to the roof, and the building stored with large amounts of combustible material, it becomes especially dangerous in case of a fire occurring in it, which, instead of being temporarily confined to the story in which it originated, spreads at once throughout the building, imperilling, to a greater or less extent, all surrounding buildings; and when the number of firemen whose lives have been lost, or who have been seriously injured by entering these or adjoining buildings having unprotected hoist-ways, is also considered, the simple requirements of rails and of closed trap-doors during non-business hours is not to be considered onerous or burdensome, and any neglect to make them conform to legal requirements no excuse for an exemption from the prescribed penalty.

The total number of examinations that have been made

The total number of violations that have been reported is as follows: —

Hoist-way and elevator openings unprovided with trap-doors

Hoist-way openings unprovided with a good and substantial railing.

Trap-doors to hoist-way and elevator openings left open, and when not in actual use.

The number of violations that have been prosecuted

84
142
6
8

INSUFFICIENT EGRESS AND FIRE-ESCAPES.

Under the provisions of the building law, fire-escapes and sufficient means of egress are required in the following classes of buildings:—

Buildings in which operatives are employed in any of the stories above the first story.

Buildings occupied by two or more families on any floor above the second floor from the level of the street.

Hotels, boarding and lodging houses, factories, mill or manufactory.

Buildings occupied, in part or in whole, for any public purpose.

All new buildings belonging to any of the above classes, are especially examined in regard to their construction, with reference to fulfilling legal requirements in furnishing suitable and ample means of egress in case of fire or accident.

The number, location, arrangement, and width of the stairways; the proposed number of occupants or operatives; the proposed use of the building; its proximity to other buildings, and the material of which it is built, all enter into consideration.

Old buildings altered to, or by occupancy brought to be comprised in any of the above classes of buildings requiring fire-escapes, are also duly inspected, and the necessary means of escape are required the same as if it was a new building.

The whole number of buildings upon which detailed reports have been made is 2,869, classified as follows:—

Lodging and boarding houses	1,134
Buildings in which operatives are employed	8
Tenement-houses	1,557
Dwellings	3
<hr/>	
Total,	2,869

MATERIAL OF THEIR CONSTRUCTION.

Of the number that have had detailed reports made upon them, the material of their construction is as follows:—

Brick and stone buildings	2,323
Wooden and frame buildings	542
Canvas	4

HEIGHT OF BUILDINGS.

The height of these buildings, in the number of their stories, is as follows:—

Of one-story buildings there are	8
Of two-story buildings there are	274
Of three-story buildings there are	1,654
Of four-story buildings there are	825
Of five-story buildings there are	87
Of six-story buildings there are	21

The roof story is in addition to, and is not comprised in the above classification.

STYLES OF ROOFS.

The styles of roofs of the foregoing buildings is as follows:—

The number of buildings having Mansard roofs is	515
The number of buildings having flat roofs is	699
The number of buildings having pitch roofs is	1,577
Buildings having styles of roofs other than the above	78

During the year requisitions have been issued on these classes of buildings as follows:—

Aisles required to be enlarged	7
New ones required	1
Obstructions in, to be removed	2

Buildings to be secured	1
Corridors extended	3
Door fastenings to be made accessible	3
Doors required to open outward	59
Outer ones required to be fastened back	6
Required to be covered with metal	5
Required to be removed	2
Required to be unlocked	1
Fly-doors altered	1
Door-ways required to be increased in width	12
New ones required	3
Elevator and hoistway openings protected	5
Fire-buckets, etc., required upon premises	7
Fire-extinguishers required to be recharged	1
Foot-lights to be protected	1
Floors to be secured	1
Forges to be protected	1
Gas-brackets to be removed	2
Heating apparatus to be protected	10
Hand rails required	6
Iron balcony and ladder fire-escapes required	48
Johnson pump required	1
Lighting apparatus made stationery	15
Ladders required	3
New bridge required to be built	1
Partitions to be removed	2
Partitions to be made non-combustible	1
Platforms required	4
Passage-ways cleared of obstructions	10
Plans called for	1
Roof lowered	1
Scuttles required to be enlarged	2
Obstructions to, required to be removed	4
Bulkheads over, required	4
Stairways to be enlarged	8
To be extended	2
Reopened	1
Secured	4
New ones required	16
Step-ladders, obstruction to, to be removed	1
Required	9
Windows required to be protected	1
Wooden balcony fire-escapes required	4
Wooden spittoons to be removed	4
Total	287

THE COMPLETED WORK UPON PUBLIC BUILDINGS.

The requirements that have been completed during the year upon this class of buildings is as follows :—

This list does not comprise, however, those buildings on which the requirements are in process of completion, nor those that were made upon the public school-houses.

The present opportunity is improved in bearing witness to the public spirit manifested upon the part of the proprietors of the several theatres, and their ready compliance in making the premises under their charge conform to the requisitions of the department.

THE BOSTON THEATRE,

Washington street, Ward 10.

Upon this theatre changes have been made in accordance with the requisition of the department, as follows :—

A door-way has been made through the northerly wall to afford egress to area at side of building and thence to Mason street.

The doors are hung to open outwards.

The window openings in this wall have been unbarred.

The stair-way leading down from the gallery to the auditorium has been reopened.

Four aisles in the first gallery have been reopened, by the removal of the lap seats.

The doors to the outer stage entrance have been made to open outward.

A metal-covered door to the door-way of fire-room has been provided, and the ceiling over the boiler has been protected.

The wooden ventilator on the roof of boiler-house has been protected.

The handrail to circular stair-way has been secured.

The ceiling underneath the stage has been protected.

Stationery gas brackets have been substituted for movable ones in all parts of the building, and gas lights protected throughout.

Wood-work removed from all heat pipes.

An iron balcony fire-escape has been provided, to include all the windows of the upper tier of dressing-rooms, at the south side of building near Mason street, with two

iron ladders extending down therefrom, to the roof of the boiler-house.

An iron balcony fire-escape has been provided to the north side of the building, to include two windows of the wardrobe room, with an iron ladder extending therefrom to the roof of the stable.

An iron balcony fire-escape has been placed to the north side of building near Mason street; each balcony including all the windows of each tier of dressing-rooms, with an iron ladder connecting each balcony, and extending down to a distance of ten feet from the ground.

The premises have been provided with high-service.

Perforated wrought-iron pipes have been placed at suitable intervals over the stage scenery, with high-service connection.

THE BOSTON MUSEUM,
Tremont street, Ward 10.

The completed work on this building is as follows:—

A wire curtain covered with non-combustible material has been provided to the proscenium opening.

A perforated wrought-iron pipe, with high-service connection, has been placed over the same.

Perforated wrought-iron pipes have been placed over the scenery, also connected with high-service.

The proscenium wall has been covered on the inside with iron.

A stair-way has been built from the easterly side of the stage, to connect with corridor in the second story, affording egress to Court square.

A metal-covered door has been provided to the door-way connecting the stage with the box-office.

A new passage-way has been made connecting the balcony circle of theatre with upper balcony of exhibition hall.

The stair-way at the south-east corner of the exhibition hall, extending from the upper to the lower balcony, has been remodelled, and made four feet wide, with square landings.

Parquet seats numbered 274, 275, 276, 277, 278, A, 283, 284, 285, 158, and 159, have been removed.

The stair-way of the Court-square entrance has been moved forward and widened to nine feet and six inches.

A new flight of stairs has been built from exhibition room to corridor, nine feet in width.

In place of the circular stair-way that extended from the auditorium of theatre to corridor, a straight flight with

square landings, extending to exhibition hall, has been built, having a width of nine feet.

An iron balcony fire-escape has been provided to the third and fourth stories of easterly side of building. The balconies are connected by an iron ladder, extending to first story, with platform.

Movable gas brackets have been made stationary, and all gas lights properly protected, and lighted by electricity.

Wood-work and combustible material have been removed from steam-pipes.

The partition separating the corridor from the store of Messrs. Smith, Doolittle & Smith, has been rebuilt of non-combustible material.

Perforated pipes, with suitable connection, have been placed on the ceiling of the above-mentioned store.

The partition separating the chemical or compounding room from the packing room has been rebuilt of non-combustible material, with metal-covered doors provided to openings.

The piping for fire-extinguishing purposes has been connected with high service.

THE GLOBE THEATRE,

Washington Street, Ward 10.

The completed requirements on this theatre are as follows:—

The proscenium opening has been provided with a wire curtain covered with non-combustible material.

Over the proscenium opening, and on the inside of the proscenium wall, has been placed a perforated wrought-iron pipe, and which has been connected with high-service.

Over the scenery on the stage has been placed perforated wrought-iron pipes, also connected with high-service.

The wooden proscenium wall has been extended to the roof, and the whole wall has been made non-combustible by filling in between the studding solid with Haley's fire-proof blocks.

A brick wall sixteen inches and twelve inches thick has been built, and now separates the southerly wing from the main building. Metal-covered doors are provided to openings.

The stud partition separating the easterly wing from the main building has been made non-combustible by solid filling with Haley's fire-proof blocks.

The six steps leading to the auditorium from the front entrance have been altered to an inclined plane.

The stair-way leading to the auditorium from the Essex-street entrance has been altered to an inclined plane.

The foot of the balcony stair-way of Essex-street entrance has been widened and extended by the removal of the projecting partition.

A hand-rail has been placed to one side of the Washington-street gallery stairs, and to both sides of the Essex-street gallery.

The main lobby entrances in gallery have been connected by an aisle, made by the removal of the fifth row of seats.

Index signs and words have been painted on corridor walls.

An iron balcony fire-escape has been placed to the easterly side of the easterly wing of building. The balconies are four feet in width, and cover two windows of each story except the first, and are connected by an iron staircase.

Access in each story, except the first, is obtained to balconies by construction of passage-ways.

All movable gas brackets have been made stationary and protected.

The wood-work from heat-pipes has been removed.

The front balcony entrance has been widened three feet, by the removal of projecting partition.

Canvass and all similar combustible material have been removed from the ceiling and walls.

High-service connection has been made with appliances for use in case of fire.

In addition to the above, the proprietor improved the occasion to make certain alterations that were deemed by him desirable, and would tend, in his opinion, to obviate certain objections that had manifested themselves in the previous occupation of the premises.

To this end he has had the mezzanine boxes removed, and the gallery lowered. This alteration required the construction of a new gallery stair-way, and the department required the old one to be kept open and used as additional means of escape in case of fire.

The location of the easterly gallery stair-way was changed, the partition under the stage was built of brick, and generally the premises have been greatly improved.

HOWARD ATHENÆUM,

Howard street, Ward 10.

The completed requirements on this theatre are as follows:—

The rear row of seats in the balcony have been removed.

The stud-partition at the head of each stair-way, separating the upper gallery from the passage-way, has been taken down.

The stair-posts in the balcony lobby have been recessed to the foot of the stair-way.

A wire curtain, covered with non-combustible material, has been provided to the proscenium opening.

A perforated wrought-iron pipe, connected with high-service, has been placed over the proscenium opening.

Over the scenery has been placed a suitable number of perforated wrought-iron pipes, with high-service connection.

The proscenium wall, on the inside, has been sheathed up to the roof with metal.

The stair-way extending from the floor of the first story has been increased to eight feet in width.

The stair-ways extending from the parquet lobby to balcony have been altered and increased in width to five feet.

The circular stair-way at the north-east corner of the building has been removed, and in its place has been constructed a stair-way, enclosed in iron, of two straight flights, with a square landing on a level with the balcony circle, and connecting with outside stair-way leading to ground.

A new stair-way has been built at the west side of building, consisting of three straight flights, with square landings, and is enclosed in iron.

An iron balcony fire-escape has been provided to include all the dressing and wardrobe rooms on the east side of the building, with two iron ladders to connect with balcony already there, affording egress to stair-way extending to the street.

An iron balcony fire-escape has been provided to the west side of the building, including all the dressing-rooms, with an iron ladder extending therefrom to the clothes-shed.

The aisles of the auditorium have been closed and two new ones made, radiating to head of stair-way.

The wooden floor over the boiler-room has been made fire-proof.

A new flooring to the east balcony has been laid.
Gas brackets have been made stationary.
Wood-work has been removed from steam-pipes.
The premises are now lighted by electricity.

BOSTON MUSIC HALL,

Winter street, Ward 10.

The aisles at the south-west corner of galleries have been widened.
The doors to the Bromfield-street entrance have been made to open outward.
The Music Hall Association not being able to acquire the right of way through Hamilton place, the requirement for an additional entrance into that place has been waived by the department.

TREMONT TEMPLE,

Tremont street, Ward 10.

On this hall the department has made the following requirements:—
Prohibiting the use of chairs and stools in the aisles of the auditorium and gallery.
Requiring the three doors connecting rear of auditorium with corridor to be unlocked at all times during the occupancy of hall.

HUNTINGTON HALL,

191 Boylston street, Ward 11.

The wood-work has been removed from contact with steam-pipes in the chemical lecture-room, private laboratory, chemical laboratory, the first year's drawing-room, and in the monitor story.

BOYLSTON MUSEUM,

Washington street, Ward 10.

The completed requirements are as follows:—

The border lights to scenery have been protected.
The location of the stove in the passage-way has been changed.
The smoke-pipe in the cellar has been protected.
Movable gas-lights near shelving protected.

The register-openings in the floor, and stove-pipes where passing through wooden partitions, have been properly guarded.

The previous requirements of the department with reference to increasing the width of the main entrance and stair-way, the widening of the doors of auditorium and gallery, the number, arrangement, and width of the aisles, the improvement of the gallery stair-way, the securing of the gallery by iron columns, the strengthening of the floor of auditorium, the buttressing of the wall on Boylston square, seem to have answered the purposes for which they were intended.

THE TABERNACLE,

Tremont street and Warren avenue, Ward 17.

The principal requirements on this building were made at the time of submission of plans for its erection in the year 1876. Additional requirements made and completed in the year following are as follows: —

To obviate vibration of the floor of auditorium, an additional girder and posts were required.

Inside doors were altered so as not to obstruct egress to outer door-ways.

An inclined plane was built to the outside of building, to allow egress from the central door-way in the southerly wall.

A platform was constructed from each of the two other door-ways in the southerly wall, one platform to connect with Tremont street, and the other with Warren avenue.

The heating apparatus was protected.

HORTICULTURAL HALL (UPPER),

Tremont street, Ward 10.

A row of chairs on each of the side aisles have been removed.

The central aisle has been increased in width to four feet and six inches.

The side aisles have been increased in width to three feet.

HORTICULTURAL LOWER HALL.

The requirements of department, for the doors of auditorium to open outward, have been complied with.

UNION HALL,

Boylston street, Ward 10.

In accordance with the requirements of the department, the foot-lights of the stage have been protected by a metal guard.

Fire-buckets have been placed upon the tie and fly floors and in accessible localities.

HIGHLAND HALL,

189 Warren street, Ward 21.

The doors of the auditorium have been made to open outward.

FANEUIL HALL,

Merchant's row, Ward 6.

Forty movable gas-lights, in the first story, have been protected.

One unsafe gas-jet, under stair-way, made safe.

Six movable gas-lights, in the basement, have been made safe.

Three heating apparatus have been made safe.

FANEUIL MARKET AND QUINCY HALL,

North and South Market streets, Ward 6.

Twelve heating apparatus have been protected.

BEETHOVEN HALL,

Rear 621 Washington street, Ward 10.

The two central aisles have been increased in width eighteen inches.

A new cross aisle, twenty-six inches in width, has been made in auditorium, one end of which connects with door-way to rear entrance.

Thirteen seats have been removed on each side of gallery, to make a clear exit to front of gallery stair-way.

The swinging gas bracket in the door-way of rear entrance has been removed.

The furnace pipe in the basement has been protected.

THE FIRST METHODIST EPISCOPAL CHURCH,

Temple street, Ward 10.

From each of the side galleries a stair-way has been built to extend down to the floor of the auditorium.
A window in the northerly wall has been altered to a doorway, with steps and platform built leading to street.
The outward doors have been made to open outward.

THE LOWELL INSTITUTE,

Washington street, Ward 10.

Two iron balcony fire-escapes have been placed to windows in westerly wall to connect with and afford egress to Music Hall.
The wood-work has been removed from the stove-pipes in the bath-rooms in the basement of the building.
The portable furnace in the first story has been protected.
The portable furnace in the ante-room, placed directly upon the floor and near wall finish, has been protected.
The gas-burners in the bath-room, and near wood, have been provided with a shield.

PARK-STREET CHURCH,

Tremont street, cor. Park street, Ward 12.

Fly-doors to auditorium made to open outward.
Certain recommendations suggested by the department have been complied with.

ARCAN'S DANCING ACADEMY,

Tremont street, cor. Berkeley, Ward 17.

The gas-brackets between the coat-boxes in the coat-room have been removed.
The gas-bracket behind the door in the store-room has been removed, and all others protected with globes.

ELIOT HALL,

Eliot street, cor. Tremont, Ward 12.

The hand-rail to the stair-way has been secured.
An additional rail has been placed upon fire-escape bridge connecting with the Winthrop School-house.

The inside door to the door-way leading to this bridge has been provided with a hook, and the door is to be hooked back at all times when the hall is in actual use.

Fire-buckets filled with water have been provided and placed in accessible localities.

The portable fire-extinguisher has been recharged.

THE JOHN A. ANDREW HALL,

Chauncy street, Ward 10.

The northerly stair-way has been reopened and the bulkhead and all obstructions have been removed. The stair-way has been placed in a suitable condition as a means of escape in case of fire.

ELSON HALL,

Call Street, Ward 23.

An iron balcony fire-escape has been placed at the southwest end of hall connecting with the roof of the ell of building.

The door and the partition on the landing of the second story stair-way has been removed, and a door of the full width of stair-way, opening outward, placed in its stead.

The fly-doors at head of the first flight of stairs supplied with hooks, and to be hooked back at all times when the hall is in actual use.

A hand-rail to the stair-way leading to the hall has been provided.

INSTITUTE OF TECHNOLOGY,

191 Boylston Street, Ward 11.

The wood-work was removed from contact with steam-pipes in the chemical lecture-room, private laboratory, chemical laboratory, first year's drawing room, and in the monitor story.

MORGAN'S CHAPEL,

Shawmut Avenue, Ward 16.

The interior doors were required to open outward, the stoves to be protected, and the wood-work removed from smoke-pipe.

BERKELEY STREET CONGREGATIONAL CHURCH,

Berkeley Street, Ward 17.

The fly-doors to the main auditorium have been made to open outward.

The obstructions in basement stair-way have been removed.

CHURCH OF OUR FATHER,

Meridian street, Ward 1.

The inner door to entrances connecting vestry with church parlor have been made to open outward.

OAKLAND HALL,

River street, Ward 24.

The inner doors, or the doors to the auditorium, have been made to open outward.

THE OLD SOUTH,

Washington street, Ward 10.

The floor of the auditorium has been secured by building two rows of brick piers in the basement.

Interior doors have been made to open outward.

The outer doors have been provided with hooks, that the doors may be fastened back when the hall is in actual use by the public.

ODD FELLOWS' HALL,

Tremont street, cor. Berkeley street, Ward 17.

The elevator openings in each story have been provided with an iron chain permanently attached thereto.

ODD FELLOWS' HALL,

2298 Washington street, Ward 21.

The door-way openings in wall in the second and third stories have been closed with brick-work.

HOSPITALLER HALL,

No. 751 Washington street, Ward 12.

The doors to hall have been made to open outward.
The floor under the stove has been protected by a metal
guard.
The outer door of building has been provided with a hook,
and the door is required to be fastened back at all times
when the hall is in actual use by the public.

EAGLE HALL,

616 Washington street, Ward 10.

The scuttle-cover in the roof has been removed, and a bulk-
head on the roof has been built over the same.
A stair-way from the floor of the upper story has been built
to connect with scuttle.
A step-ladder has been provided, to afford egress from the
roof of building to the roof of adjoining building on
Washington street.

FANEUIL HALL TEMPERANCE REFORM CLUB,

21 Hanover street, Ward 7.

The requirements of the department, with reference to the
number and width of aisles, and the door-way, have been
complied with.

CONCORDIA HALL,

Motte street, Ward 16.

An iron balcony fire-escape has been placed upon the Harrison-
avenue front of building to include two windows of each
story, except the first.

SECOND METHODIST EPISCOPAL CHURCH,

Bromfield street, Ward 10.

The important requirements with reference to the construc-
tion of the building and protection from heating appara-
tus have been complied with.

ASSOCIATION HALL,

South street, Ward 23.

The doors of the auditorium have been made to open outward.

The door in the partition at the head of the second flight of stairs has been removed.

KENNEDY HALL,

93 Warren street, Ward 21.

The width of the lower stair-way has been increased to twelve feet.

A new rear stair-way has been constructed, eight feet in width, extending down from the hall to the second floor.

The doors to the stage entrance have been made to open outward.

The platform at the head of stage has been lowered to the level of the floor.

The seats in the gallery have been rearranged.

A new gallery door-way has been cut to afford egress into corridor.

A door-way eight feet wide has been cut to connect the rear stair-way with drawing-room.

INSTITUTE HALL,

113 Dudley street, Ward 21.

Upon this hall the doors at the foot of the stair-way in the second story of the stage entrance have been made to open outward.

The doors of the corridor in the second story of stage entrance also to open outward.

PUBLIC SCHOOL-HOUSES.

Requirements in the matter of egress, fire-escape, and combustible material have been made upon fifty-two of these buildings, which have been substantially complied with.

THE INSPECTION OF BUILDINGS.

The number of violations that have been investigated and reported on is 833.

This number does not include numerous violations that were removed on verbal notification, but those only that from any cause it became necessary to take official action.

The following statement exhibits the nature of these violations:—

Bay-windows built over street line	.	.	1
Boiler room not built of brick	.	.	1
Backing of recess 4 inches thick	.	.	6
Cellar bottom below grade	.	.	1
Cellar bottoms not concreted	.	.	4
Chimney supported by wood-work	.	.	1
Combustible material stored in dwelling	.	.	1
External combustible covering	.	.	4
Floor timbers built into flues	.	.	18
Floor timbers entered too far into party-wall	.	.	2
Flues not plastered	.	.	6
Flues, wood-work against	.	.	19
Furnace improperly set	.	.	1
Furnace too near ceiling	.	.	1
Illegal height of wooden addition	.	.	1
Improper construction	.	.	57
Insufficient egress and no fire-escape	.	.	149
No levellers to brick piers	.	.	4
No iron shutters	.	.	45
No permit	.	.	66
No scuttle and ladder	.	.	4
No shield	.	.	3
No soapstone borders to register-boxes	.	.	30
No soapstone rings	.	.	8
No thimbles	.	.	2
No tie-irons	.	.	6
No rails to hoist-way	.	.	142
No traps to hoist-way	.	.	84
Party walls not carried up	.	.	2
Party wall not solidly built	.	.	1
Piles cut above grade	.	.	3
Poor material	.	.	8
Registers not cased	.	.	56
Stair trimmers and floor timbers built on a 2-ring arch	.	.	2
Stirrup-irons not large enough	.	.	2
Stirrup-irons running through party-wall	.	.	4
Steps projecting over street line	.	.	3

Smoke-pipe near wood-work	2
Smoke-pipe not properly protected	2
Thimbles improperly set	4
Timber, small sized	2
Timber not splayed	1
Trap-door to hoist-way left open	6
Walls not anchored	9
Walls not corbelled	4
Walls not thick enough	5
Walls not through roof	1
Wooden lintels	2
Wooden buildings erected in building limits.	6
Wood-work near hot-air pipe	41

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VIOLATIONS OF THE BUILDING LAW REFERRED TO THE CITY SOLICITOR.

Building No. 208 Purchase street. — The complaint was for erecting a brick wall of a less thickness than required by the provisions of Section 1, Chapter 371, Acts of 1872. The complaint was settled upon the defendant rebuilding the wall in conformity with legal requirements.

Building No. 371 Atlantic avenue. — The complaint was for not providing the hoist-way openings with suitable trap-doors and railings. Case now pending.

Building No. 74 North street. — The complaint was for not providing the hoist-way openings with suitable trap-doors and railings. Complaint withdrawn upon compliance with legal requirements.

Building No. 72 Purchase street. — The complaint was for leaving the trap-doors to the hoist-way open at 5 o'clock, A.M., and when not in actual use by the occupants. The case was settled by the payment of the usual fine.

Building No. 74 Purchase street. — The complaint was for leaving the trap-doors to the hoist-way open at 6 o'clock in the morning, and when not in actual use. The case was settled upon payment of the usual fine.

Building No. 9 Hawkins street. — The complaint was for leaving the trap-doors to the hoist-way open at 3 o'clock in the morning, and when not in actual use. The complaint was settled by fine.

Building No. 130 Canal street. — The complaint was for leaving the trap-doors open at 1 o'clock in the morning, and when not in actual use. The complaint was settled by fine.

Building No. 205 and 207 State street. — The complaint was for leaving the trap-doors to the elevator-opening unclosed at $11\frac{1}{2}$ o'clock, P.M., and when not in actual use. The complaint was settled by fine.

Building No. 25 and 27 Arch street. — The complaints were that the hoist-way openings through and upon each floor were not provided with good and sufficient trap-doors and a suitable railing. The complaint was withdrawn upon the hoist-way being made to conform to legal requirements.

EXHIBIT G.

Showing the Number of unsafe Buildings, unsafe Walls, etc., that have been rebuilt, taken down, or secured.

	Rebuilt.	Secured.	Taken down.	Not Completed.	Total.
Unsafe buildings		28	24	19	71
" ells				3	3
" walls	3	32	3	8	46
" battlement wall . .	9	•1		3	13
" fence wall	12			3	15
" gable wall		1			1
" retaining wall . . .	1				1
" bill-board		3			3
" capping-stone				2	2
" clothes-shed	1			1	2
" conductor		2		2	4
" coping	1	2			3
" cornice	3			1	4
" coving		1			1
" door-cap	1				1
" fence		2			2
" foundation	2	6		1	9
" floor		4		2	6
" floor header		1			1
" grand stand		1			1
" gutter		1		1	2
" in case of fire		1			1
" overloaded floor				1	1
" pier	1	3			4
" railing		4		1	5

EXHIBIT G.—*Continued.*

	Rebuilt.	Secured.	Taken down.	Not Completed.	Total.
Unsafe roof		1	1	1	3
" sign-board				1	1
" skylight		1			1
" slate		6		1	7
" stairway	1				1
" tower		1			1
" trap-door		2			2
" ventilator		1			1
Leaky roof				1	1
Dangerous chimneys . . .	265	40		83	388
Defective flues	1	124		14	139
Unsafe heating apparatus		88	4	34	126
Total	301	357	32	183	873

EXAMINATIONS.

The daily outside work of the department consists in the inspection of buildings reported to be in an unsafe condition from any cause whatever; deficiency in the means of egress or fire-escapes upon buildings required by law to be provided with them; the supervision of the erection of new buildings and the enlargement of old ones, with reference to provision for public safety and conformity to the requirements of the building law.

The number of examinations is as follows:—

New buildings	9,927
Additions, alterations, and repairs	7,774
Special examinations	148
Insufficient egress and fire-escapes	1,085
Hoist-way examinations	145
Steam-engines, boilers, furnaces, etc..	468
Heating apparatus	397
Signs	23
Plans	159
Fire	403
Unsafe buildings	789
Dangerous chimneys	682

Defective flues	130
Unsafe heating apparatus	60
Sundry	126
<hr/>	
Total	22,316

COMPLETED BUILDINGS.

The total number of brick and stone buildings completed during the year is one hundred and ninety-one (191), at an estimated cost of four million two hundred eighty-three thousand seven hundred seventy-five dollars (\$4,283,775).

These buildings contain forty-two (42) stores, and are constructed to accommodate 271 families.

The total number of wooden and frame buildings completed is five hundred and six (506), at an estimated cost of one million forty-eight thousand five hundred and ninety dollars (\$1,048,590).

These buildings contain twenty-nine (29) stores, and are constructed to accommodate three hundred and ninety (390) families.

The total number of buildings upon which completed alterations have been made is two thousand one hundred and sixty-five (2,165), at an estimated cost of one million one hundred fourteen thousand two hundred and ninety dollars (\$1,114,290).

BRICK AND STONE BUILDINGS COMPLETED DURING THE YEAR 1877.

Boiler and engine-houses	6
Brewery	3
Carriage-houses and wagon-sheds	1
Churches and chapel	4
Dwellings	79
Dwellings and stores	7
Family hotels and tenement houses	14
Family hotels, tenement houses, and stores.	2
Greenhouses	1
Hotels	3
Ice-houses	1
Laundries	1
Manufacturing	6
Markets	7
Mechanical	2
Mercantile	19
Offices	6
R.R. stations and freight houses	3

Stables	.	.	.	.	.	.	13
School-houses, Public	.	.	.	.	.	.	2
Storage	.	.	.	.	.	.	7
Stores	.	.	.	.	.	.	1
Work-shop	.	.	.	.	.	.	3
 Total	.	.	.	.	.	.	191

WOODEN AND FRAME BUILDINGS COMPLETED DURING THE
YEAR 1877.

Boat-houses	.	.	.	.	.	.	2
Boat-club houses	.	.	.	.	.	.	2
Boiler and engine houses	.	.	.	.	.	.	2
Bonded warehouse	.	.	.	.	.	.	1
Carriage-houses and wagon-sheds	.	.	.	.	.	.	9
Churches	.	.	.	.	.	.	3
Coal and lumber sheds	.	.	.	.	.	.	3
Dwellings	.	.	.	.	.	.	247
Dwellings and stores	.	.	.	.	.	.	13
Grand stand	.	.	.	.	.	.	1
Greenhouses	.	.	.	.	.	.	3
Hospitals	.	.	.	.	.	.	2
Ice-houses	.	.	.	.	.	.	3
Laundries	.	.	.	.	.	.	2
Manufacturing	.	.	.	.	.	.	15
Mechanical	.	.	.	.	.	.	9
Offices	.	.	.	.	.	.	9
Poultry-houses	.	.	.	.	.	.	3
Railroad stations and freight-houses	.	.	.	.	.	.	6
Restaurant	.	.	.	.	.	.	1
Scale-houses	.	.	.	.	.	.	1
Stables	.	.	.	.	.	.	87
School-houses, Public	.	.	.	.	.	.	1
Storage	.	.	.	.	.	.	46
Stores	.	.	.	.	.	.	17
Work-shops	.	.	.	.	.	.	18
 Total	.	.	.	.	.	.	506

EXHIBIT H.

Showing the whole Number of Buildings Completed during the year 1877, in each Ward, for which permits have been issued.

REPORT OF INSPECTOR OF BUILDINGS.

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RECAPITULATION.

WARD.				NO. OF STORIES.						STYLE OF ROOF.				ESTIMATED COST.	
	No. of Buildings.	No. of Families.	No. of Stores.	1.	2.	3.	4.	5.	6.	Man.	Flat.	Pitch.	Hip.	Sun.	
1	46	31	..	30	15	1	..	..	..	11	15	19	1	..	\$72,210
2	27	18	1	12	14	1	..	..	..	8	7	12	..	..	49,385
3	4	5	..	2	..	2	..	..	..	..	3	1	..	..	6,200
4	19	20	2	5	4	10	..	..	..	1	14	4	..	..	32,875
5	15	17	2	3	3	9	..	..	..	..	14	1	..	..	25,850
6	13	6	8	9	3	1	..	..	..	1	10	2	..	..	220,575
7	7	7	1	1	2	1	2	1	..	..	6	..	1	..	59,100
9	3	2	..	2	..	1	..	..	..	..	3	..	..	..	4,950
10	5	1	5	..	..	..	3	1	1	1	4	..	..	..	213,000
11	58	132	5	9	14	26	..	8	1	47	10	1	..	..	1,579,800
12	33	19	12	9	7	1	15	..	1	2	29	1	1	..	1,510,375
13	17	14	2	11	1	5	..	..	..	..	10	7	..	..	24,675
14	26	22	6	11	10	4	..	1	..	9	14	3	..	..	87,380
15	25	35	2	9	8	8	..	..	..	6	15	4	..	..	78,780
16	3	22	2	1	..	..	2	..	..	..	3	..	..	..	50,000
17	6	3	1	2	3	..	1	..	..	..	5	1	..	..	75,250
18	16	9	..	5	2	8	1	..	..	7	9	..	..	..	125,100
19	14	14	..	4	9	..	1	..	..	4	8	2	..	..	28,450
20	57	66	2	21	31	5	..	..	..	25	21	10	1	..	157,680
21	61	53	3	18	43	..	..	..	..	25	6	27	3	..	160,600
22	24	35	8	11	10	1	1	1	..	6	9	8	1	..	68,460
23	92	59	2	36	54	1	1	..	..	10	8	62	11	1	330,900
24	81	48	5	37	41	3	..	..	..	10	10	52	9	..	239,445
25	45	23	2	21	23	1	..	..	..	9	7	23	6	..	131,325
	697	661	71	269	297	89	27	12	3	182	240	240	34	1	\$5,332,365

EXHIBIT I.

Showing the Number of Permits that have been issued for New Buildings, for Alterations, Steam Engines, etc.; the number of Unsafe Buildings, Unsafe Heating Apparatus, etc., reported; the number of Buildings that have been examined for Fire-Escapes, and the number of Requisitions, etc., that have been issued during the years 1876-1877.

EXHIBIT J.

Showing the Number of New Buildings, etc., Completed under the Supervision of the Department since its Organization, together with the Estimated Cost.

	NEW BUILDINGS.		ALTERATIONS.		UNSAFE BUILDINGS.		DANGEROUS CHIMNEYS.		STEAM ENGINES, OVENS, AND FURNACES.		HEATING APPARATUS.		HOIST-WAYS AND ELEVATORS.		TOTAL.	
	No.	Estimated Cost.	No.	Estimated Cost.	No.	Estimated Cost.	No.	Estimated Cost.	No.	Estimated Cost.	No.	Estimated Cost.	No.	Estimated Cost.	No.	Estimated Cost.
1871-5.	5,711	\$55,536,673	6,362	\$4,454,018	472	\$50,200	1,407	\$19,884	257	\$36,500	240	\$12,500	138	\$8,600	14,587	\$60,118,375
1876.	879	6,727,130	1,785	1,335,446	60	15,780	425	6,948	235	32,270	206	9,220	68	3,518	3,652	8,130,312
1877.	697	5,332,365	2,165	1,114,290	168	18,816	331	5,019	266	137,115	505	68,736	50	3,750	4,205	6,680,091
	7,287	\$67,596,168	10,312	\$6,903,754	700	84,796	2,163	\$31,851	758	\$205,885	945	\$90,456	256	\$15,868	22,444	\$74,928,778





